



Patent
Attorney's Docket No. 040071-245

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Johan NILSSON et al.

Application No. 09/996,513

Filed: November 28, 2001

For: Methods and Apparatus for Channel
Estimation Using Plural Channels

Group Art Unit: 2631

Examiner: Unassigned

Confirmation No.: 3520

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INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.


Some of these documents were cited in a European Search Report prepared for the presently application. A copy of the Report are also enclosed.

The documents are being submitted within 3 months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later, therefore under 37 C.F.R. § 1.97(b), no fee or statement is required .

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

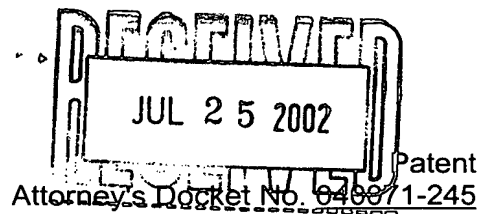
Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 
Theodosios Thomas
Registration No. 45,159

P.O. Box 1404
Alexandria, VA 22313-1404
Phone: (919) 941-9240

Date: July 23, 2002



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Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

No additional fee for submission of an IDS is required.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

P.O. Box 1404
Alexandria, Virginia 22313-1404
(919) 941-9240

Date: _____

~~By~~

Theodosios Thomas
Registration No. 45,159

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

ATTORNEY'S DKT NO.

040071-245

APPLICATION NO.

09/996,513

APPLICANT

Johan NILSSON et al.

FILING DATE

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GROUP

2631

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U.S. PATENT DOCUMENTS

Examiner Initials	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication (MM-DD-YYYY)
	Number	Kind Code (if known)		
	5 191 598		Bäckström et al.	03-02-1993
	5 583 886		Rohani et al.	12-10-1996
	5 680 419		Bottomley	10/21/1997
	5 822 380		Bottomley	10-13-1998
	09/573,157		Nilsson	05-19-2000

FOREIGN PATENT DOCUMENTS

Examiner Initials	Foreign Patent Document		Country	Date of Publication (MM-DD-YYYY)	Translation	
	Number	Kind Code (if known)			Yes	no
	05172694		JP(Abstract)	01-10-1995	x	
	08214496		JP(Abstract)	02-20-1998	x	
	09009794		JP(Abstract)	08-07-1998	x	
	98 47240	A1	WO	10-22-1998	Abs	
	99 05833	A1	WO	02-04-1999	x	
	99 22454	A2	WO	05-06-1999	Abs	
	0 955 741	A1	EP	11-10-1999	x	
	00 11805	A1	WO	03-02-2000	x	
	00 14896	A1	WO	03-16-2000	Abs	
	01 89115	A	WO	11/22/2001	Abs	
	1 089 458	A2	EP	04/04/2001	x	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	Proakis, John G., "Digital Signaling over a Bandwidth-Constrained Linear Filter Channel, 6.7.2 An Adaptive Channel Estimator", <i>Digital Communication, Second Edition</i> , 1989, pp. 624-627
	"3 rd Generation Partnership Project (3GPP); Technical Specification Group Radio Access Network; Physical channels and mapping of transport channels onto physical channels (FDD), 3 G TS 25.211 version 3.3.0, Release 1999, pages 2-42.
	"3 rd Generation Partnership Project (3GPP); Technical Specification Group Radio Access Network; Physical layer procedures (FDD), 3 G TS 25.214 version 3.3.0, Release 1999, pages 2-44.
	J.H. Winters, "Signal Acquisition and Tracking with Adaptive Arrays in the Digital Mobile Radio System IS-54 with Flat Fading", <i>IEEE Trans. Veh. Technol.</i> , vol. 42, pp. 377-384 (Nov. 1993).
	Hoon, Kim et al. "An efficient Channel estimation Scheme for Downlink in WCDMA/FDD Systems" Database Inspec "Online!", Institute of Electrical Engineers, Stevenage, GB & IEEE 54th Vehicular Technology Conference, VTC Fall Oct. 2001
	"3 rd Generation Partnership Project (3GPP); Universal Mobile Telecommunications Systems (UMTS); Physical Layer Procedure (FDD); 3GPP TS 25.214 version 3.4.0, Release 1999, pages 1-48
Examiner Signature	Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.